

中国云南山茶科二新属： 华核果茶及云南茶

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一、华核果茶 *Sinopyrenaria* 新属

花單生叶腋間，有梗。萼片与苞片几相似，叶狀，脫落。花瓣5个，基部連合。雄蕊多数，基部微与花瓣連合；花絲無毛。花药丁字形。子房有5至6角，有毛，頂端微張开；每室有2个重叠胚珠；花柱5个，分离；柱头成小头狀。果为核果狀，不开裂，頂端張开，子房室有时退化。种子長形凸出或压扁，無翅，种脐長形。乔木。叶革質，有叶柄，有鋸齿。

此属3种，产于亞洲热带，2种产于中国云南。

此属的亲緣关系多少有疑問。其不完全連合的心皮及分离的花柱与核果狀的果，显明指出它与核果茶属 *Pyrenaria* 的 *Mastersia* 組有密切关系，亦与匹克茶属 *Piquetia* 与实果茶属 *Stereocarpus* 有关系。但其叶狀小苞片与萼片与上面数属不同，而近似紫莖属 *Stewartia* 与赫德木属 *Hartia*。显然它是一个有分別的新属，而我曾誤認為属于核果茶属。

1. 云南华核果茶 *Sinopyrenaria yunnanensis*, 新組合 (圖版五十三)。

Pyrenaria yunnanensis Hu, 靜生生物調查所彙報, 植物組, 第8卷137頁, 1938。

2. 車里华核果茶 *Sinopyrenaria cheliensis*, 新組合 (圖版五十四)。

Pyrenaria cheliensis Hu, 靜生生物調查所彙報, 植物組, 第8卷140頁, 1938。

3. 加納华核果茶 *Sinopyrenaria Garrettiiana*, 新組合。

Pyrenaria Garrettiiana Craib, 丘園彙報 1924: 87 頁。

照边沁与虎克的植物志属第一卷第一部第185頁，核果茶属 *Pyrenaria* 的原始描写为“萼片常为5个，不等，与小苞片及花瓣几逐渐蛻变，頂端尖”。但华核果茶属与之不同处在后者有叶狀小苞片与萼片，显然与几圓形白色的花瓣有別。照 Craib 的原始

描写, 他的 *Pyrenaria Garrettiana* 亦有“2 个小苞片, 矩圆形至矩圆披针形, 顶端钝, 有时微不等, 约长 10 毫米, 阔 4 毫米, 绿色, 有 1 中脉……萼片 5 个, 与小苞片几相似……”显然如我往年所指出与 *Sinopyrenaria yunnanensis* Hu 与 *Sinopyrenaria chliensis* Hu 有关系, 因为它有叶状小苞片与萼片而与花瓣不同。故有此新组合。

二、云南茶 *Yunnanea* 新属

花单生, 大形, 有花梗。萼片与苞片相似, 但逐渐较大, 革质, 不脱落。花瓣 5 个, 下部连合成一较长管, 另有 1 个较小的。雄蕊多数, 成数组, 外面数组各连成一组, 与花冠高度连合, 内面一组仅下部连合; 花丝几无毛; 花药丁字形, 顶端钝, 无毛。子房未见。果核果状, 极迟缓开裂? 托以大形革质苞片与萼片, 有细果梗, 三室, 其中二室通常退化; 外果皮木质, 极厚, 内果皮薄, 子房室甚小, 中柱细瘦。种子 2 个, 叠生, 无翅。常绿乔木。叶革质, 有叶柄, 有细锯齿。

此属一种, 产于中国云南南部。

云南茶 *Yunnanea xylocarpa*, 新种 (图版五十五)。

小乔木高至 6 米; 小枝圆柱形, 有条纹, 几无毛, 有极少黑色腺体。叶革质, 椭圆形至阔披针形, 长 6 至 10 厘米, 阔 2 至 3.8 厘米, 顶端长渐尖, 基部楔形至几圆形, 有胼胝状细锯齿, 无毛, 中脉与侧脉在两面均隆起, 细脉在上面凹陷, 下面成网状; 叶柄上面有深槽, 长 6 至 10 毫米, 无毛。花单生, 侧生。萼片革质, 几圆形, 在果时直径至 2.5 厘米。花瓣 5 个, 倒卵形, 长 3.5 厘米, 阔 2.5 厘米, 下部连合成管长至 1.2 厘米。雄蕊多数, 成数组, 外面数组各连成一组, 与花冠高度连合, 内面一组仅下部连合, 有极少毛, 但有黑色腺体; 花药颇大, 卵圆形, 顶端钝, 无毛, 黑色。幼果三室, 二室退化, 顶端有短尖, 具长毛; 成熟果几球形, 直径 3.5 厘米, 外果皮木质, 厚 1 厘米, 外面有细突起, 在基部微开裂, 子房室长 7 毫米, 阔 4 毫米, 内果皮薄; 果梗细瘦, 无毛, 长 1 厘米。种子 2 个, 几三角形, 长 5 毫米。

云南, 顺宁县, 雪山, 高 2,400 米, 生森林中, 乔木高约 6.5 米, 花红色, 果木质, 暗褐色, 常见, 俞德浚 16021 号(模式标本), 1938 年 5 月 27 日。

此特异属显然与山茶属 *Camellia* 相近似, 其红色大花与多数各连成一组的外面雄蕊皆似山茶属, 但与之相异处在花瓣连合成管长至 1 厘米及花丝与花冠高度连合。子房与花柱未见。幼果有三室, 其中二室退化。本属最特异的性质属于果, 初看时似一未成熟未开裂的蒴果。与山茶属的果的首要区别为本属之果托以大形革质苞片与萼片。见有一果的厚外果皮在基部微开裂。但此一极厚的木质外果皮是否最后将分裂为

果瓣而脱落,大是可疑之事。外果皮如此之厚,使其果貌似一木質核果,但其性質則与核果迥异。果的甚小的子房室在山茶亞科中無可比拟。中軸之細小与在山茶屬和槭槲木屬 *Tutcheria* 皆不相同。从表面觀之,果不开裂,与核果茶屬 *Pyrenaria* 似有关系。但后一屬的花絲仅在基部連合及与花冠連合,花柱分离(亞屬 *Mastersia*),核果頂端多少分离而有花柱的残余,革質外果皮远为較薄,种子較大。在花与果的性質上,兩屬相距頗远。又本屬不开裂的果亦多少可与实果茶屬 *Stereocarpus Hallier* 相比,但后者花冠基部仅有短管,花絲不連合成一組亦不高度与花冠連合,子房5室,成五角形,不开裂,基部有柄,外果皮頗薄,果室大,中各有3个頗大种子。

SINOPYRENARIA AND YUNNANEA, TWO NEW GENERA OF THEACEAE FROM YUNNAN, CHINA

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I. *Sinopyrenaria* gen. nov.

Flores solitarii, axillares, pedicellatis. Sepala bracteaeque similia, foliacea, decidua. Petala 5, basi connata. Stamina numerosa, basi corollam leviter adnata; filamentis glabris. Antherae versatiliae. Ovarium 5-6-gonum, pilosum, apice leviter apertum; ovula in loculis 2, superposita; styli 5, liberi; stigmatibus capitellato. Fructus drupaceus indehiscens, apice apertus, loculis nonnullis abortis. Semina elongata, convexa vel satis compressa, exalata, hilum elongatum. Arbor, Folia coriacea, petiolata, serrulata.

3 species in tropical Asia, 2 in southern Yunnan, China.

The affinity of this genus is somewhat problemal. The incompletely connate carpels with free styles and drupaceous fruit clearly show its close affinity to the section *Mastersia* of the genus *Pyrenaria*, and also to the genera *Piquetia* and *Stereocarpus*. But the foliaceous bracteoles and sepals differ from those of the above genera and suggest those of *Stewartia* and *Hartia*. Altogether it is a distinct new genus which I formerly erroneously referred to the genus *Pyrenaria*.

1. *Sinopyrenaria yunnanensis*, comb. nov. (Pl. LIII).

Pyrenaria yunnanensis Hu in Bull. Fan Inst. Biol. Bot. ser. 8: 137, 1933.

2. *Sinopyrenaria cheliensis*, comb. nov. (Pl. LIV).

Pyrenaria cheliensis Hu in Bull. Fan Inst. Biol. Bot. ser. 8: 140, 1933.

3. *Sinopyrenaria Garrettiana*, comb. nov.

Pyrenaria Garrettiana, Craib in Kew. Bull. Misc. Inform. 1924: 87.

According to the original diagnosis as exemplified in Benthams and Hooker's Genera Plantarum Vol. 1. pars. 1: 185, the genus *Pyrenaria* is characterized as "Sepala saepius 5, inaequalia, a bracteolis ad petala subgradatim acuta." But *Sinopyrenaria* differs in having foliaceous bracteoles and sepals which are markedly different from the subrounded white petals. According to Craib's original diagnosis of his *Pyrenaria Garrettiana*, it has also "bracteolae 2, oblongae vel oblongo-lanceolatae, obtusae, inter se parum inaequales, circa 10 mm. longae et 4 mm. latae, virides, unicostatae, Sepals 5, bracteolis subsimila". Evidently as I formerly noticed this species is closely related to *Sinopyrenaria yunnanensis* Hu and *Sinopyrenia cheliensis* Hu in having foliaceous bracteoles and sepals dissimilar to the petals. Hence the new combinations.

II. *Yunnanea* gen. nov.

Flores solitarii, magni, pedicellati. Sepala bracteis similia, sed gradatim maiora, coriacea, persistentia. Petala 5, pro parte inferiore in tubo satis longe connata, cum unam additionam minorem. Stamina numerosa, in series plures disposita, series exteriores ad tubum corollae alte adnata, series interiores pro parte inferiore connata, filamentis verrucosis glabris; antherae versatiles, apice obtusae, glabrae. Ovarium ignotum. Fructus drupaceus tarde dehiscens (?), sepalis bracteisque coriaceis magnis subtentus, 3-locularis, loculis 2 plerumque abortis, exocarpeo ligneo, crassissimo, endocarpeo tenui; cavum loculorum parvum; columna centralis gracilis. Semina in loculis 2, superposita, oblonga, exalata. Arbor. Folia coriacea, petiolata, serrulata.

Monotypic genus in southern Yunnan, China.

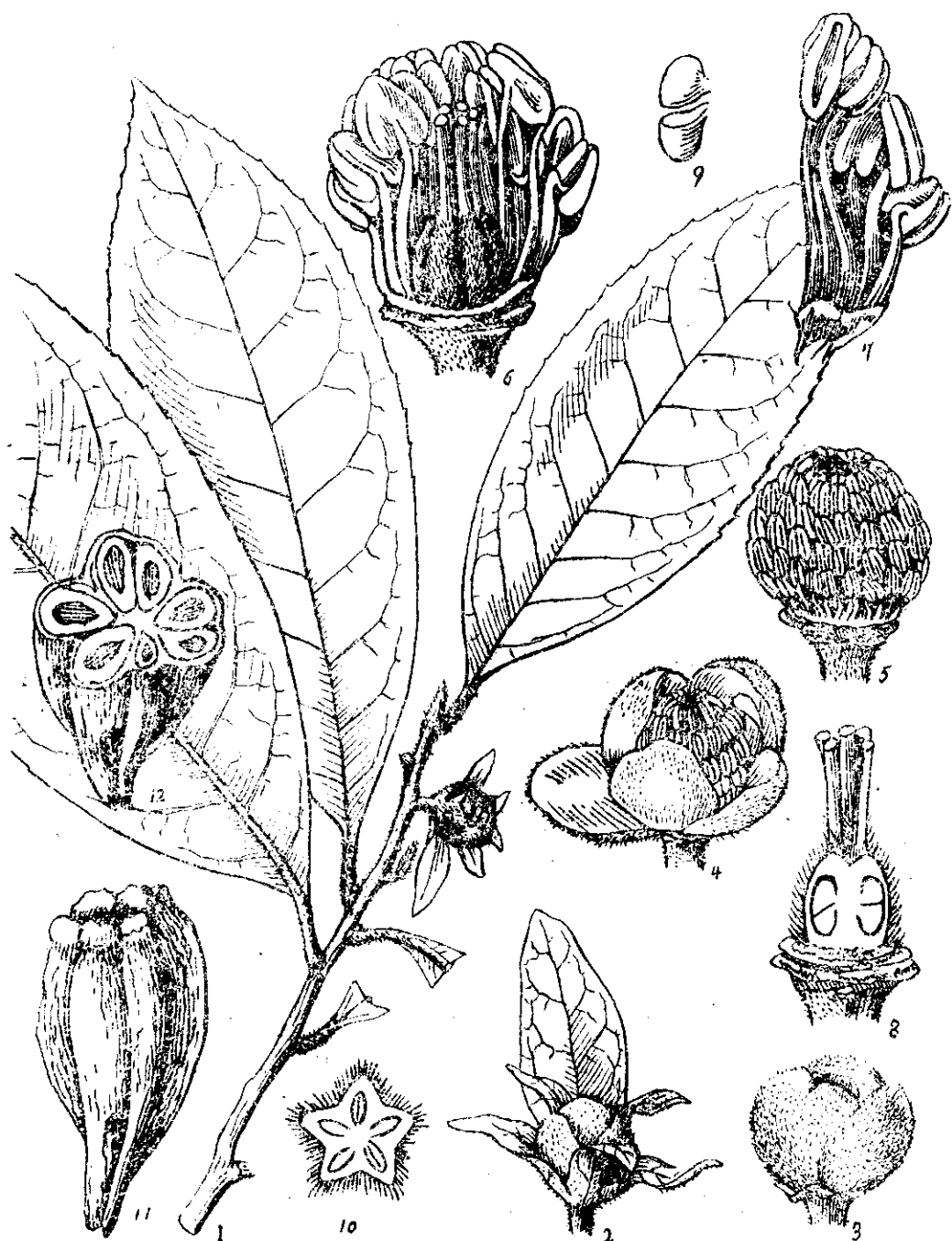
Yunnanea xylocarpa, sp. nov. (Pl. LV).

Arbor parva ad 6 m. alta; ramuli teretes, striati, glabrescentes, parcissime nigro-glandulosi. Folia coriacea, elliptica vel late lanceolata, 6-10 cm. longa, 2-3.8 cm. lata, apice longe acuminata, basi cuneata vel subrotundata, margine callososerulata, glabra, costa nervisque utraque facie elevata, nervulis supra impressis subtus reticulatis; petioli supra excavati, 6-10 mm. longi, glabri. Flores solitarii subterminales. Sepala coriacea, suborbicularia, in fructu ad 2.5 cm. diametro. Petala 5, obovata, 3.5 cm. longa, 2.5 cm. lata, parte inferiore in tubum 1.2 cm. longum connata. Stamina numerosa, in series plures disposita, filamentis serierum pluralium exteriorum ad corollam alte adnatis, seriei interioris pro parte inferiore connatis,

parcissime pilosis sed nigro-verruculosis; antherae satis magnae, ovatae, obtusae, 3 mm. longae, glabrae, nigrae. Fructus juvenis 3-locularis, loculis 2 abortis, apice apiculatus, longe pilosus; fructus maturus depresso globosus, 2.5 cm. altus, 3.5 cm. diametro, exocarpeo lignoso, 1 cm. crasso, extus verruculoso, ad basin leviter dehiscente, cavum locularum 7 mm. longum, 4 mm. latum; endocarpeo tenuo; pedicelli graciles, glabri, 1 cm. longi. Semina 2, subtrigona, 5 mm. longa.

Yunnan: Shunning Hsien, Snow Range, alt. 2400 m., among forest, tree 20 ft., flower red, fruit woody, dark brown, common, T. T. Yü, No. 16021 (type) May 27, 1938.

This striking genus is undoubtedly closely related to the genus *Camellia* in its large red flowers with numerous monodelphous outer stamens highly adnate to the corolla, differing in the petals forming a tube to 1.2 cm. long and stamens highly adnate to the corolla. The ovary and style are not found. The young fruit is 3-celled, with 2 cells aborted. But the most striking characteristics are those of the fruit. At first sight, the fruit looks like an immature capsule not yet dehiscent. But it differs first from the genus *Camellia* in that it is subtended by large persistent coriaceous bracts and sepals. In one fruit it is found that at base the thick exocarp slightly dehiscent. But it is doubtful if the very thick woody exocarp will finally dehisce into distinct valves and fall apart. The exocarp is so thick that the fruit looks like a woody drupe. But it is not really drupaceous in nature. The very small cell cavity in the fruit finds no parallel in the tribe *Camellieae*. The insignificance of the central axis differs also from the genera *Camellia* and *Tutcheria*. Superficially its indehiscent fruit may suggest affinity to the genus *Pyrenaria*, which differs however in stamen filaments only united at base and adnate to the corolla, in its free styles, its drupaceous fruit somewhat free at the apex with remains of styles (sect. *Mastersia*) its coriaceous and comparatively thin pericarp and large seeds. In the characteristics of flowers and fruits these two genera are rather widely separated. Its indehiscent fruit may also be compared to the genus *Stereocarpus* Hallier, which differs in corolla with only a short basal tube, in stamen filaments being not monodelphous and not highly adnate to the corolla, in the 5-celled 5-gonous indehiscent fruit stipitate at base and with rather thin exocarp and large cell cavities in each of which there are three rather large seeds.



雲南核桃果茶 *Sinopyrenaria yunnanensis* Hu

1. 花枝 (×1) 2. 花蕾 (×2) 3. 花蕾, 除去小苞片与萼片 (×3) 4. 展开状花蕾
5. 花蕾, 除去花被 6. 部分雄蕊与雌蕊的放大 7. 部分雄蕊的放大 8. 子房的縱切面放大
9. 胚珠放大 10. 子房的横切面放大 11. 核果 (×1) 12. 核果, 横切 (×1)



軍里华核果茶 *Sinopyrenaria cheliensis* Hu

1. 枝与叶 ($\times 1$) 2. 核果 ($\times 1$) 3. 核横切 ($\times 1$) 4. 种子 ($\times 1$)



雲南茶 *Yunnanea xylocarpa* Hu

1. 花枝 ($\times 1$) 2. 花冠, 展开, 表示 5 花瓣及 1 附加花瓣与雄蕊 ($\times 1$) 3. 雄蕊 ($\times 3$)
4. 幼果横切, 表示 3 室 ($\times 1$) 5. 果 ($\times 1$) 6. 果的縱切 ($\times 1$) 7. 种子 ($\times 3$)